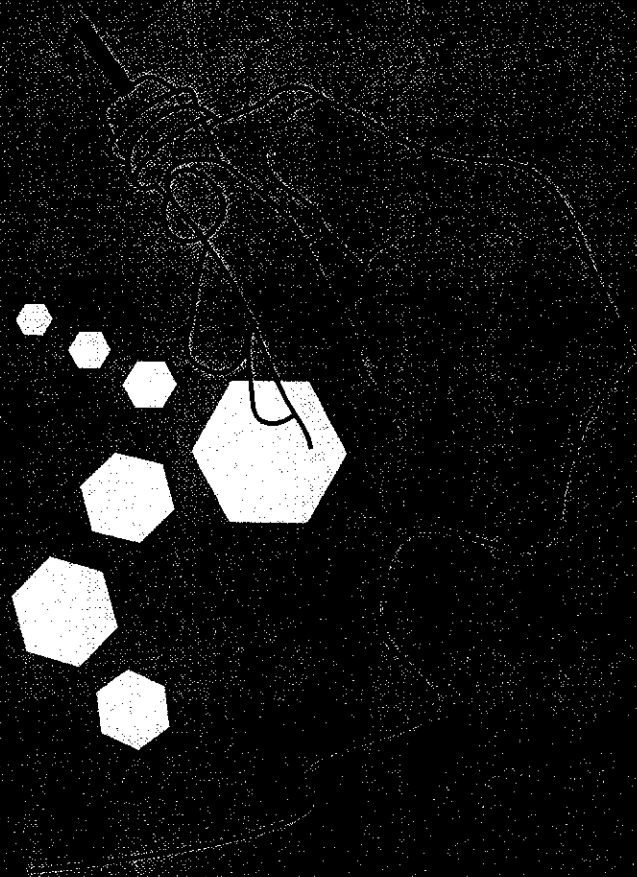


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DEVELOPING COLLABORATION SKILLS IN FIRST YEAR UNDERGRADUATE BUSINESS STUDENTS

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ABSTRACT

Collaboration skills are defined as the set of skills and capabilities required to work effectively within and across groups to achieve group goals. The development of these skills are assumed but not taught directly or evaluated in undergraduate group assessments in many university subjects.

This paper discusses a research project investigating the development of student collaboration skills in the compulsory first year undergraduate subject 21129 Managing People and Organisations. One of the key aims of the subject is to help students understand and acquire a range of collaboration skills that will enhance their work readiness.

During August 2007, 290 student surveys were completed by students after their initial formation into groups during tutorials. These surveys asked students about their past experiences of group work, and their expectations and motivations with respect to group work in this subject over the coming semester. A follow-up survey was conducted in November, and attempts to capture the extent of changes, if any, in student perceptions of their experience developing collaboration skills over the semester.

This paper reports on the findings of stage one of this project. An overview of student attitudes and perceptions is presented, as well as findings on the systematic variation of these with respondent characteristics. The finding of a number of statistically significant associations of student satisfaction with the method of group formation employed in tutorials is then discussed as a surprise finding from this research.

INTRODUCTION

Collaboration skills are defined as the set of skills and capabilities required to work effectively within and across groups to achieve group goals. The development of these skills are assumed but not taught directly or evaluated in undergraduate group assessments in many university subjects. This paper discusses a research project investigating the development of student collaboration skills in the compulsory first year undergraduate subject 21129 Managing People and Organisations. An overview of student attitudes and perceptions is presented, with systematic variation among respondent groups explored further through statistical data reduction techniques. The

statistical association of student satisfaction with the method of group formation employed in tutorials is then discussed as a surprise finding from this research.

BACKGROUND

Pratt and Edwards are the co-coordinators of the compulsory first year undergraduate business subject 21129 *Managing People and Organisations*. This subject introduces students to the discipline of management, and requires students to demonstrate newly developed collaboration skills as part of a broader degree-level teaching and learning goal. Collaboration skills are defined in this paper as the set of skills and capabilities required to work effectively within and across groups to achieve group goals.

Managing People and Organisations (MPO) is taught in both Autumn and Spring semesters, and has student enrolments of between 400 and 1300 students across two campuses. A new assessment structure was introduced in Spring 2007, following the recommendations of a school-level taskforce which conducted a formal review during the previous semester. Students now complete a group-based tutorial presentation (20%), an individual paper (40%), and a final exam (40%).

The group-based assessment requires student groups to investigate the application of an assigned body of management theory in various organisations and present their findings in their nominated tutorial. Students are formed into groups of approximately five to seven students (at the discretion of the tutor) during tutorials in week four. They are required to complete a range of structured learning activities over the semester towards their group assessment. Some of these activities include group discussion of individual assumptions and expectations relating to how students intend to work together over the semester (to help groups move through the "storming" stage of group development), and the completion of formal agendas and minutes of team meetings (to encourage the development of healthy group norms). Students are also introduced to formal theory relating to groups and teams in lectures and tutorials, and are required to complete an individual and confidential assessment of their fellow team members following completion of their group presentation.

Although group-based assessments have been used extensively in this subject (and others) for many years, it is unclear whether collaboration skills are actually being developed in students, despite this being a central objective for this subject. Many students remark anecdotally that they have negative experiences of group assessments in the degree. A review of the literature on developing student collaboration skills suggests that these experiences may not be atypical of other universities.

REVIEW OF THE STUDENT COLLABORATION LITERATURE

The development of collaboration skills is expected increasingly by universities and employers of university graduates (Lewis, 1998; Goldfinch, 1999; Natishan, 2000; Tanyel, 1999; Chen, 2004; Ettington, 2002). While there has been an increase in the use of student group projects at university, the training of students for this work remains problematic (Goldfinch, 1999; Natishan, 2000; Chen, 2004; Ettington, 2002; Hansen, 2006), with many students harbouring negative attitudes to these experiences (Buckenmyer, 2000). Further, it has been claimed that there is a lack of standardisation in how teams are used, and inconsistency in team performance expectations and training (Natishan, 2000).

Learning to work effectively in teams has been identified as a function of student motivation to learn, attitude toward group work, learning preferences, valuing of other learning styles and educational activities (Gardner, 1998). Other research has identified a broad and growing range of factors associated with improved collaboration among students. These include properly structured teams (Lewis, 1998; Werner, 2001), the development of a strong team spirit (Werner, 2001), allocating a significant component of the total grade toward group work (Lewis, 1998), focusing on the acquisition of student skills and not just content (Ettington, 2002), providing students with a conceptual model of individual and team skills (Lewis, 1998; Ettington, 2002), teaching students skills in interpersonal and written communication (Bhavani, 2000), encouraging observation and evaluation among students (Winter, 2000; Hoddinott, 2001), encouraging student reflection following group experiences (Lewis, 1998; Bhavani, 2000; Ettington, 2002), and intervening when problems arise (Lewis, 1998) and/or through all the different stages of the group life cycle (form, storm, norm, perform and adjourn) (Bolton, 1999; Ettington, 2002). Further to these aspects, other researchers have claimed that team size, roles (Denton, 1997) and group selection can also impact upon student performance and satisfaction (Huxham, 2000; Mahenthiran, 2000; Denton, 1997). Irrespective of the design of the actual learning experience, researchers have found that student collaboration skills are difficult to teach in a one-off exercise (Denton, 1997) without reinforcement elsewhere in the student academic program (Lewis, 1998; Ettington, 2002; Mutch, 1998).

Researchers investigating the formation of collaboration skills among students have drawn on a range of different research instruments. These include faculty interviews (Natishan, 2000), student focus groups (Natishan, 2000), surveys (Werner, 2001), personality profiles (Gardner, 1998; Chen, 2004), longitudinal research (Gardner, 1998) and pre and post test experimental designs (Cheng, 2006; Chen, 2004; Jeffs and Banister, 2006), sometimes conducted within an action research context (Jeffs and Banister, 2006).

Whilst much research has claimed various improvements in student skill formation, recent research has found that teamwork knowledge and skills are more easily impacted than student confidence and attitude toward such teamwork (Chen, 2004). This last finding was of particular interest to the researchers, given anecdotal evidence of negative student experiences and a faculty expectation that students would demonstrate competence in collaboration following completion of this subject.

OVERVIEW AND AIMS OF THE RESEARCH PROJECT

Soon after the co-coordinators assumed responsibility for this subject in early 2007, they were successful (along with Pitsis) in their application for a faculty teaching and learning grant funding the investigation of collaboration skill development in this subject. A pre- and post-test student survey were designed and conducted (after university ethics approval) in week four after student groups were formed, and in week thirteen after the completion of all group assessments. Survey one and two both captured a range of demographic data perceived to be relevant (gender, date of birth, tutorial number, degree, years of full time work experience, number of semesters completed in the degree, and country of origin). The first survey asked students about their past experiences of group work in general and in previous university subjects, their expectations and motivations relating to group work in this subject, and details relating to the method of group formation used in their tutorial. Survey two

investigated students' experiences and motivations relating to group work in this subject, and asked students about the extent to which they believed they had developed skills in collaboration.

The anonymous student responses from the two surveys were matched together using three ethics-approved identifying variables: gender, date of birth and mother's maiden name. The results of survey one only are reported in this paper due to time constraints analysing recently data collected from survey two.

METHOD

Data Collection and Sample

A total of 290 student surveys (n=290) were completed across 11 tutorial classes and two university campuses, representing a response rate of approximately 85 per cent (N=345). There were slightly more females (58%) than males (42%), with international students making up just over a quarter of all respondents (27%).

The student body were more mature than we had previously assumed, given this is a compulsory first year subject in the undergraduate degree. The median age of respondents was 20 years, with some students as old as 46 years. The median number of semesters completed was one, with one student claiming to have completed 10 semesters. 83 percent of all respondents claimed to have experienced some involvement in group work at university, perhaps in the previous Autumn semester.

The Questionnaire

Table 1 shows the items contained in the questionnaire used for the first survey, that obtained information on the students general and most recent experiences with group work at the University, as well as their expectations and motivations regarding group work within the subject MPO. The questionnaire also contained items that obtained information on students' demographic characteristics, whether they had previous experience in group work, what method had been used in their tutorial in MPO to form groups, their level of satisfaction with the use of this method, and the overall level of their relationships with other members of their tutorial group. In relation to the method of group formation, students were asked whether their groups were formed by tutors randomly allocating members, group members allocating by topic, self-allocation by students, or the use of "other" methods. Where students selected "other" methods, they were asked to provide further details.

Table 1: Descriptive Statistics: Means and Standard Deviations

	Questionnaire Item	Mean	S.D.
	General Past Experiences of Group Work		
1	I enjoyed participating in group work	3.51	.820
2	I possessed the necessary knowledge and skills to participate effectively in group work	3.98	.620
3	I found it easier to learn in groups	3.13	.838
4	I found it easier to learn working on my own	3.46	.896
5	Other members of the group didn't work as hard as me	3.00	.990
6	Disagreements amongst group members arose and were difficult to resolve	2.37	.937
7	The quality of work produced by groups is superior to work produced by individuals	3.12	.937
	Most Recent Experience of Group Work at University		
8	I would be prepared to work again with the members of my most recent group	3.67	.987
9	Teaching staff made expectations for group work clear at the beginning of the semester	3.58	.879
10	Appropriate resources were provided by teaching staff to help our group work effectively together	3.40	.877
11	Group members worked together effectively	3.67	.822
12	Tasks were shared evenly among all group members	3.48	.945
13	Group members were given the opportunity to evaluate each other	3.64	.952
14	I was given the opportunity to reflect and learn from my experience of group work	3.55	.833
15	The quality of my group's work was high	3.67	.827
16	My group was awarded a satisfactory grade for the group assessment	3.65	.934
17	I was awarded a satisfactory grade for the group assessment	3.67	.912
18	Overall, I learned a lot about the nature of group work	3.62	.848
19	Overall, I learned a lot about the subject content through my experience of group work	3.39	.938
	Expectations of Group Work in MPO		
20	I will enjoy my experience of group work in this subject	3.80	.718
21	I possess the necessary knowledge and skills to participate effectively in group work	4.01	.587
22	I am confident I will complete my share of the work in this group	4.28	.610
23	I am confident that my fellow group members will complete their share of work in this group	4.01	.654
24	I expect that there will be disagreements among members of the group that will be difficult to resolve	2.73	.967
25	I expect that there will be disagreements among members of the group that will be difficult to resolve	3.99	.649
26	I am confident that my group will produce work of high quality	4.01	.696
27	I expect that our group will be awarded a satisfactory grade for the group assessment	3.99	.708
28	I am looking forward to working with the other members of my group	2.40	.919
29	I expect that I will probably have to do most of the work	3.77	.825
30	Overall, I think I will learn a lot about the nature of group work	3.75	.800
31	Overall, I think I will learn a lot about the subject content through my experience of group work	3.80	.718
	Motivations for Group Work in MPO		
32	Group work provides an opportunity to make new friends at university	4.31	.623
33	University group assignments are designed to minimise tutor workload for tutors rather than to aid my educational development	2.76	.924
34	Group work in this subject will teach me valuable skills that will help my future career	3.79	.873
35	I would rather complete assessments by myself than work as part of a group	3.18	.985

Note: Respondents indicated their level of agreement with each of the above items using a 5-point rating scale with response options varying from 1 = Strongly Disagree to 5 = Strongly Agree.

RESULTS

Student Attitudes and Perceptions

An overview of student responses to questions relating to students' past experiences of group work (prior to this subject), expectations of group work in MPO, and their motivations in relation to group work in MPO are found in Table 1. These questions were scored on a five-point likert scale, with 1 representing strong disagreement through to 5 representing strong agreement. On average, students appear to demonstrate a mild preference for working in groups with a mean rating of 3.51, which is above the scale mid-point of 3. On average, they would be prepared to work again with their recent group (M=3.67). They claimed the quality of work in their groups was high (M=3.67), with the award of a satisfactory group (M=3.65) and personal grade (M=3.67). Overall, they appeared to learn more about the nature of group work (M=3.62) than the subject content (M=3.39) as a result of these group experiences. Given the nature of these overall positive experiences, it is not surprising to find students claiming to possess the necessary knowledge and skills for group work (M=3.98).

In relation to student expectations of group work in this subject, they displayed even more positive average responses. Students were generally looking forward to working with their new group members (M=3.99), and had positive expectations of their groups producing work of high quality (M=3.99) and satisfactory grades (M=4.01). A similar number of students believed they possessed the necessary knowledge and skills for group work in this subject (M=4.01), with positive expectations that individuals (M=4.28) and fellow group members (M=4.01) would complete their share of work. Overall, students believed they would learn a lot about both the nature of group work (M=3.75) and the subject content (M=3.75) in this subject. The increase in subject content expected to be learned through groups may be influenced by the nature of this subject's content appearing to be of relevance to group-based assessments. Part of the reason for such positive expectations relating to group work in this subject may also be the result of strong student motivations to make new friends through these assessments (M=4.31), particularly given this is a first-year subject in the undergraduate degree.

To assist in further analysis, data reduction was achieved with factor analysis being performed on each of the four sets items as shown in Table 2. The Principal Components method of extraction was used, with factors being rotated to simple structure using the Oblimin procedure, as implemented in the SPSS statistical program. Root-one criterion and the inspection of scree-plots were used to determine the number of factors to be extracted. This reduced the effect of sampling error and the risk of obtaining spuriously high relationships by capitalising on chance. The list of factors obtained, and the corresponding items with the highest loadings on each of the factors, is shown in Table 2.

Table 2: 'Family' of Items Factor Analysed Separately

Type of items forming factors	Factors	Items with highest loadings on each factor	Variables with Statistically Significant Correlations with Factors (correlation)
GENERAL PAST EXPERIENCES OF GROUP WORK	<i>Positive Experiences</i>	I enjoyed participating in group-work I found it easier to learn in groups I found it easier to learn working on my own (NEG) I would rather complete assessments by myself than work as part of a group (NEG) The quality of work produced by groups is superior to work produced by individuals	Gender (-.155*) Age (.159*) Satisfactory group formation (.162*)
	<i>Group Problems</i>	Disagreements among group members arose and were difficult to resolve Other members of the group didn't work as hard as me	
MOST RECENT EXPERIENCE OF GROUP WORK AT UNIVERSITY	<i>Reflexivity</i>	I was given the opportunity to reflect and learn from my experience of group work Overall, I learned a lot about the nature of group work. Group members were given the opportunity to evaluate each other	Satisfactory group formation (.155*)
	<i>Group Grade</i>	I was awarded a satisfactory grade for the group assessment My group was awarded a satisfactory grade for the group assessment	
	<i>Productivity of Group Relationships</i>	Tasks were shared evenly among all group members Group members worked together effectively I would be prepared to work again with the members of my most recent group The quality of my group's work was high	
	<i>Influence of Teaching Staff</i>	Appropriate resources were provided by teaching staff to help our group work effectively together Teaching staff made their expectations for group work clear at the commencement of the subject	
EXPECTATIONS OF GROUP WORK IN MPO	<i>Positive Expectations</i>	Overall, I think I will learn a lot about the nature of group work. Overall, I think I will learn a lot about the subject content through my experience of group work. I will enjoy my experience of group work in this subject I am looking forward to working with the other members of my group	Years of fulltime work exp (.147*) Satisfactory group formation (.327**)

	Expectations of Group Problems	I expect that I will probably have to do most the work I expect that there will be disagreements among members of my group that will be difficult to resolve	Gender (-.127*) Satisfactory group formation (.193**)
	Self Efficacy	I am confident that I will complete my share of the work in this group I possess the necessary knowledge and skills to participate effectively in group work	Years of fulltime work exp (.226**) Satisfactory group formation (.127*)
MOTIVATIONS OF GROUP WORK IN MPO	Instrumentality	Group-work in this subject will teach me valuable skills that will help my future career Group work provides an opportunity to make new friends at university	Previous group work (.137*) Satisfactory group formation (.216**)

* p<.05; ** p<.01.

Note: Gender was coded 1 = "male" and 2 = "female". Previous group work at university was coded 1 = "yes" and 2 = "no".

Positive Experiences was comprised of question items relating to student preferences for, and enjoyment and ease of learning associated with past group work. *Group Problems* was based on perceptions of past disagreements and unequal workload. *Reflexivity* was comprised of question items relating to perceived opportunities for student evaluation and reflection, and overall learning about the nature of group work in the past. *Group Grade* was based on a satisfactory individual and group grade being awarded. *Productivity of Group Relationships* referred to the extent to which group members worked together effectively, sharing tasks evenly among group members and producing work of high quality. *Influence of Teaching Staff* was based on teaching staff making clear their expectations for groups and providing them with resources to help groups work together effectively. *Positive Expectations* was comprised of question items that related broadly to the extent to which students expected to enjoy working in their group and learn a lot about both the nature of group work and the content of the subject. *Expectations of Group Problems* was comprised of question items relating to student expectations of disagreements among group members and an unequal distribution of workload among members. *Self Efficacy* captured the extent to which students believed they possessed the necessary knowledge, skills and confidence to participate effectively in group work. Finally, *Instrumentality* was based on student beliefs that group work in this subject would provide them opportunities to make new friends and teach them valuable skills helpful to their future careers.

Variation of Student Attitudes and Perceptions with Other Variables

A review of these general findings does not reveal a great deal about the specific experiences, expectations and motivations of different kinds of individuals. Given the previously discussed evidence of persistent negative student attitudes towards group work in the literature, our own anecdotal observations of students harbouring negative attitudes towards group work, and the significant diversity of our undergraduate student body, we decided to conduct further analysis.

Factor scores were obtained from factor analyses using the Regression method. Correlations with these factor scores with the student characteristics, and other

variables obtained from the questionnaire data, were calculated. Variables describing student characteristics or other contextual variables that produced statistically significant correlations with the factor scores are displayed in the last column of Table 2. The magnitudes of these correlations are shown in brackets.

Statistically significant correlations were identified among six of the ten factors, as noted in Table 2. The strongest correlations were found between the satisfaction of group formation with Positive Expectations ($r=.327$, $p<0.01$), years of full time work experience and Self Efficacy ($r=.226$, $p<0.01$), and satisfaction of group formation with Instrumentality ($r=.216$, $p<0.01$). Other correlations were also observed with other variables such as gender, age and previous group work, however these were generally weak.

DISCUSSION AND CONCLUSIONS

Student satisfaction with the method of group formation used in tutorials was a statistically significant correlation variable in each factor family discussed previously. In summary, students who were satisfied with the group formation method were more likely to report positive experiences and reflexivity in previous groups, have higher positive expectations and levels of self-efficacy, lower expectations of group problems, and be motivated to make new friends and learn valuable career-relevant skills.

Further analysis of the most common methods of group selection are found in Table 3. Students were generally satisfied with the method of group formation used by their tutor, whether selected randomly ($M=4.0$), selected by topic ($M=3.71$) or self-selected ($M=3.97$). Although the difference between these three methods was not statistically significant, each of these three methods were more satisfying statistically than "other" methods employed ($M=3.34$). The category "other" included the practice of nominating student leaders who picked their own teams and a combination of self and random allocation.

Table 3: Mean rating of satisfaction with method of group formation for each method of group formation

Randomly selected by tutor		Selected according to topic		Self selected		Other	
M	S.D.	M	S.D.	M	S.D.	M	S.D.
4.00 ^a	.603	3.71 ^b	.816	3.97 ^c	.826	3.34 ^{abc}	.865

Note: The difference in means with the same superscript are statistically significant for a type 1 error rate of 5%.

The role of student satisfaction with the method of group formation was a surprise finding for the subject coordinators. Had we realised the associations between this variable and student perceptions of their past experiences and expectations and motivations in this subject, we might have been more deliberate in restricting the autonomy of individual tutors in selecting their method of group formation. Although one study has claimed that groups of paired friends are more satisfied and score higher marks than groups that are randomly allocated by the teacher (Mahenthiran, 2000), we are not aware of the possible influence of group formation methods on

student sensemaking (Weick, 1995) (particularly of past group work experiences), expectations and motivations in other research.

It may be possible that student satisfaction with the method of group formation may have some role to play in shaping persistent student attitudes and confidence in relation to group work identified by Chen, Donahue and Klimiski (2004). This variable will be explored in further analysis of survey two in relation to actual student experiences and perceptions of skill development in MPO during Spring 2007.

The development of collaboration skills among university students has been argued from the literature to be problematic, with many students harbouring negative attitudes that can persist even when students acquire relevant knowledge and skills in this same area. Significant statistical correlations were found between a number of factor "families" and various demographic and contextual factors. In particular, students who were satisfied with the group formation method employed by the tutor in their class were more likely to report positive experiences and reflexivity in previous groups, have higher positive expectations and levels of self-efficacy, lower expectations of group problems, and be motivated to make new friends and learn valuable career-relevant skills. Unlike other statistically significant associations identified, this finding was a surprise to the researchers and represents an understudied variable in the development of student collaboration skills. Further research will be undertaken to explore the role of this variable on actual student experiences in the subject when the findings of survey two are also analysed.

REFERENCES

- Bbhavani, S. H., and Aldridge, M. D (2000) Teamwork across disciplinary borders: A bridge between college and the workplace, *Journal of Engineering Education*, Vol 89 91): pp 13-15.
- Bolton, M. K. (1999) The role of coaching in student teams: A "just-in-time" approach to learning, *Journal of Management Education*, Vol 23 (3):233-250.
- Buckenmyer, J. A. (2000) Using teams for class activities, *Journal of Education for Business*, pp 98-107.
- Chen, G., Donahue, L. M., and Klimiski, R. J (2004) Training undergraduates to work in organizational teams, *Academy of Management Learning and Education*, Vol 3 (1): 27-40.
- Cheng, K.-W. (2006) Does Cooperative Learning Enhance the Residual Effects of Student Interpersonal Relationship Skills? A Case Study at a Taiwan Technical College, *The Journal of American Academy of Business, Cambridge*, 10, pp 312 - 316.
- Denton, H. G. (1997) Multidisciplinary team-based project work: Planning factors, *Design Studies*, Vol 18 (2): 155-170.
- Ettington, D. R., and Camp, R. R (2002) Facilitating transfer of skills between group projects and work teams, *Journal of Management Education*, Vol 26 (4): 356-379.
- Gardner, B. S., and Korth, S. J (1998) A framework for learning to work in teams, *Journal of Education for Business*, Vol 74 91): 28-33.
- Goldfinch, J., Laybourne, P., Macleod, L., and Stewart, S (1999) Improving groupworking skills in undergraduate through employer involvement, *Assessment and Evaluation in Higher Education*, Vol 24 (1): 41-51.
- Hansen, R. S. (2006) Benefits and Problems With Student Teams: Suggestions for Improving Team Projects, *Journal of Education for Business*, Vol 82 (1): 11-19.
- Hoddinott, J., and Young, D (2001) Generic skills teaching in materials science and engineering, *Journal of Engineering Education*, 90, pp 707-711.
- Huxham, M. (2000) Assigning students in group work projects. Can we do better than random? *Innovations in Education and Training International*, Vol 37 (1): 17-22.
- Jeffs, T. and Banister, S. (2006) Enhancing collaboration and skill acquisition through the use of technology, *Journal of Technology and Teacher Education*, Vol 14 (2): 407-433.
- Lewis, P., Aldridge, D., and Swamidass, P. M. (1998) Assessing teaming skills acquisition on undergraduate project teams, *Journal of Engineering Education*, Vol 87 (2): 149-155.

- Mahenthiran, S., & Rouse, P. J (2000) The impact of group selection on student performance and satisfaction, *International Journal of Educational Management*, Vol 14 (6): 255-264.
- Mutch, A. (1998) Employability or learning? Groupwork in higher education, *Education and Training*, Vol 40 (2): 50-56.
- Natishan, M. E., Schmid, L. C., Mead, P (2000) Student focus group results on student team performance issues, *Journal of Engineering Education*, 80, pp 269-272.
- Tanyel, F., Mitchell, M. A., & Mcalun, H. H (1999) The skill set for success of new business school graduates: Do prospective employers and university faculty agree? *Journal of Education for Business*, Vol 75 (1): 33-37.
- Weick, K. E. (1995) *Sensemaking in Organizations*, Thousand Oaks, Sage Publications, Inc.
- Werner, J. M., & Lester, S. W (2001) Applying a team effectiveness framework to the performance of student case teams, *Human Resource Development Quarterly*, Vol 12 (4): 385-402.
- Winter, J., K (2000) Student evaluation of a learning exercise designed to develop effective meeting skills, *Journal of Education for Business*, Vol 75 (4): 210-214.